



CANADIAN
ANESTHESIOLOGISTS'
SOCIETY

CAS 2022

ANNUAL MEETING

June 24 - 26

Halifax, NS

2022 CAS Annual Meeting

Postoperative Care

(Abstracts and Case Report/Series)

Comparison of Intraperitoneal Versus Intravenous Dexamethasone on Postoperative Nausea and Vomiting after Laparoscopic Cholecystectomy

Authors:

Nazemroaya A, Behzad A¹; Behrooz B, Keleidari B²; Azim C, Honarmand C³; Alireza D, Arabzadeh D⁴; Fatemeh E, Ettehadieh E⁵

¹ Department of Anesthesiology and Critical Care, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran

² Department of surgery, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran

³ Anesthesiology and Critical Care Research Center, Isfahan University of Medical Sciences, Isfahan, Iran

⁴ School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran

⁵ Faculty of Nursing and Midwifery, Islamic Azad University, Isfahan (Khorasgan) Branch, Isfahan, Iran

Introduction:

Despite all benefits that are provided by laparoscopic cholecystectomy (LC), such as rapid recovery and shorter hospital stays by patients, the incidence of postoperative nausea and vomiting (PONV), and also post-operative pain (POP), still remain high. This study was designed with the aim of examining the effect of intraperitoneal (IP) dexamethasone on the reduction of PONV and POP.

Methods:

A prospective randomized double-blind clinical trial, with population of eighty-seven adult patients that scheduled for laparoscopic cholecystectomy, with American society of anesthesiology class I-II, were randomized into three groups, IP (intraperitoneal dexamethasone) (n=29), IV (intravenous dexamethasone) (n=29) and C(control)(n=29) groups. Patients were followed up about study outcomes including PONV, POP, consumption of antiemetic's and hemodynamic status during first 24 hours after operation.

Results:

Present study showed that, in the first 24 hours of post operation, no significant differences in nausea(p:0.41) and vomiting(p:0.38), between IP and IV dexamethasone groups. However, there was found lower severity of nausea (SN) in the IP group (p:0.001). Also, the VAS score that represents POP was significantly reduced in the IP group (p:0.02). No significant differences between all three groups were found about hemodynamic status during operation.

Discussion:

Administration of 8mg of IP dexamethasone, associated with significantly reduced pain, and less effective with reduced severity of nausea, after laparoscopic cholecystectomy, in comparison to IV and control groups. But IP dexamethasone had no similar effect on the reduction of PONV.

References:

1. De Q. Tran, Daniela Bravo, Prangmalee Leurcharusmee, Joseph M. Neal; Transversus Abdominis Plane Block: A Narrative Review. *Anesthesiology* 2019; 131:1166–1190
2. Rajnikant K, Bhukal I, Kalaria N, Soni SL, Kajal K. Comparison of palonosetron and dexamethasone with ondansetron and dexamethasone to prevent postoperative nausea and vomiting in patients undergoing laparoscopic cholecystectomy. *Anesth Essays Res* 2019;13:317-22.

3. Nouri B, Arab M, Lotfpour S. Efficacy of Intraperitoneal Dexamethasone Infusion in Reduction of Shoulder Pain and Nausea/Vomiting After Gynecological Laparoscopy. *Fertility Gynecology Andrology*. 2021;1(1):e115089.
4. Alsheefa AZ, Khaled MA, Elham ME, Zeinab AK, Ahmed MH. Intra Peritoneal Instillation of Bupivacaine or Bupivacaine plus Magnesium Sulphate or Bupivacaine plus Dexamethasone on Post-Operative Pain after Laparoscopic Cholecystectomy: A Randomized Controlled Study .*The Egyptian Journal of Hospital Medicine* (July 2021) Vol. 84, Page 2655-2662
5. Basim HA, Ameer ZH, Raad JI. Comparative Study of Dexamethasone Versus Ondansetron as Adjuvants to the Intra-Peritoneal Irrigation of Bupivacaine for Reducing the Postoperative Pain in Patients Undergoing Elective Laparoscopic Cholecystectomy. *SysRevPharm*2020;11(12):463-468.